

**METHODS AND APPARATUS FOR OPERATING
GAS TURBINE ENGINES**

ABSTRACT OF THE DISCLOSURE

A method is provided for detecting airflow reversal in a sump system of a gas turbine engine. The method includes positioning a first pressure sensor at a sump vent to sense a discharge flow pressure from a sump within the sump system, positioning a second pressure sensor in the sump to sense a pressure in the sump, comparing the sensed pressures obtained from the first and second pressure sensors to determine a pressure difference, and comparing the pressure difference to a predetermined maximum allowable pressure difference.